

## APPENDIX

11/19/79

SEMINAR AXILROD'S REPORT

AXILROD

I'll give a moderately lengthy presentation and Mr. Sternlight will follow with another presentation. The tables in front of you dated November 19 are based, given the paths that were derived from the Committee's decision last October 6 and put down in what we call working form. As you recall the Committee had a decision to accept monetary growth rates of M1 of 4-1/2 and M2 and M3 of about 7-1/2 or somewhat lower should they develop. We calculated the reserve increases that are consistent with the 4-1/2 percent M1 and the 7-1/2 percent M2 from September to December. The week, our estimate of the demand for money, the pattern of money demand was very close to a constant rate of growth of about 4-1/2 percent each month. That is, at the time of the October 6 meeting we were estimating a 4.8 percent for October. We had a lot of ups and downs in the course of the month, but that was the original estimate at the time of the Committee met, so we constructed the reserve path that was roughly consistent with this fairly steady 4-1/2 percent increase in M1 lacking any clear evidence at the time of the meeting that it should be 10, zero, or any kind of variation like that. Then we deseasonalized that and put it in the form that you see on the table in front of you. That is we developed a seasonally unadjusted 4 week average for the various reserve measures for the week ending October 10 to October 31 inclusive, that's a 4 week period. And then another series for the weeks ending, the 3 week period November 7 to 21. There was the 7 week interval between Committee meetings. It didn't seem reasonable to hit a 7 week average, and similarly it didn't seem reasonable to aim each week so we arrived at the thought that a 4-week--an initial 4 week and then a 3 week would be the most reasonable basis for preceding. So the, in a sense in the first 4 weeks Mr. Sternlight was aiming at 4-week average and the next 3 weeks at a succeeding 3-week average. And as you can see we have provided a monetary base level which in the week ending October 10

through 31, not to read numbers on the table, but to be sure we are all on the same table as 150,943 in terms of millions and then was higher in the week ending the weeks of 7th to the 21st. We have provided the total reserve level, which is of course is the monetary base less currency and a nonborrowed reserve level. Now we took the Committee's assumption that borrowings ought to start out at \$1,500 and that is shown in the next to the last panel, group, of member bank borrowings as our initial assumption of \$,500. In the event, you will see that the demand for reserves ran much stronger than that. And excess reserves we assume at around \$200 million which hadn't been far off the previous, what had previously occurred. The results--to focus for a minute on the column October 10-31--were that monetary base ran strong relative to path, total reserves ran strong by \$390 million relative to path, and nonborrowed reserves as the Desk attempted to hold back in the face of this demand for reserves ran \$231 million. In consequence, below path, in consequence borrowing ran \$623 million above the path in that 4-week period and excess reserves in this kind of uncertainty that followed the Committee's actions ran high above path and continued to run high in the weeks of the 7th to 21st. In the weeks of 7th to 21st the monetary base again ran high relative to path, but came down. It was less high than in the preceding week. Total reserves was less high than in the preceding week and nonborrowed reserves appear to be on path. Now they were below path in the first 2 weeks, and this November 7th through 21st includes assumptions shown in footnote 2 about what the outcome for this week will be. As the Committee knows that can't be entirely predictable because the factors affecting nonborrowed reserves other than Mr. Sternlight's operations, that is float, currency, and such items do vary quite widely, and so there can be misses because of that--substantial misses because of that. And finally excess reserves appear to be running above path. Now there are some points that might be made about this, and 1 is how do these path levels of reserves relate to the multipliers that you were working with, and the deposits that

they supported or indeed caused. And there's a summary of that on the 2nd table. Now I would like to stress that again that where we have M1 type deposits this was calculated here in a sense as a residual. That doesn't mean it isn't relevant but we haven't broken it down by the distribution of deposits among large banks versus small banks and it's not in that fine a detail. And this shows for example on the first line, again it repeats the excess reserves running above path, which would be a factor increasing the demand for reserves relative to the path that the Committee wished and presumably the Committee might want the excess reserves to be accommodated. Now, required reserves did turn out to be higher than we had estimated in our paths, but not because of required reserves against M1 type deposits, but because other deposits were growing stronger than had been originally estimated and were in a sense absorbing reserves from M1. Thus, time and savings deposits included in M2 looking to the 7th to 21st column were \$10 million above. Again that's a trivial amount and not really worth considering. But large negotiable CDs, required reserves against those items were running \$270 million above path as banks were issuing many more large CDs than we had expected in view of the fact that they were losing a considerable amount of savings deposits and even indeed demand deposits and were trying to replace these funds in the way they could which was by issuing market instruments--large negotiable CDs as well as money market certificates. But these large negotiable CDs are not in any of our Ms, and they were absorbing reserves that would otherwise support M.

VOLCKER            This doesn't include the marginal reserves.

AXILROD            No, this is abstracting for the marginal which we assume we just accommodate. This is the basic reserve and represents the distribution, the change in the distribution of those deposits. But the biggest factor was domestic net interbank demand deposits which from the 7th to the 21st had an increase that absorbed about \$425 million more reserves than

we had allowed for. Now this factor fluctuated rather considerable in the course of the period. And \$270 million you see from the 10th to the 31st kind of came toward the end of that period and the \$425 million in the 7th to the 21st turned out by the time the period was over to be a fairly steady factor in the course of the period. If one had been certain about it in advance, one might have argued that the total reserve path should have been adjusted to, added to, to put those in but you would have wanted to provide the reserves needed to support those deposits rather than have those reserves dragged out away from money supply type deposits. Some such argument could have been made. We on the staff felt very reluctant to make changes, to make such changes until there was a very clear cause in view of the fact that it could all be reevaluated at the time of the next FOMC meeting. Skipping to the memorandum item, this is the implied impact of nonmember deposits on bank reserves. The negative sign there of minus 195, that reflects the strength in nonmember bank demand deposits. That is nonmember bank demand deposits were running stronger than had been built into the path--stronger than their usual relationship to member bank demand deposits. Given that strength, that would have implied reducing member bank demand deposits, member bank required reserves behind member bank demand deposits by \$195 million to offset that. A correction--that is to say you might have considered lowering the path by \$195 million because you had to suppress member bank demand deposits, since nonmember bank demand deposits were running stronger than you had expected. In the event, you could see that the demand deposits in M1 in that week were \$434 million below path in any event, so you could say there was--it was \$240 million more than you might have want for perfect M1-type behavior. In fact M2 did turn out to come pretty close to path or right on path. M1 was below path. CDs were stronger, but that was financing a moderate expansion in bank credit, and as I say no adjustment was made to path because it was part of the Committee's decision to restrain bank credit as well as to restrain growth in M1 and M2 or so we

thought. Now 2 questions do come up in relation to this and Peter is going to describe what he did and when and how, but there are 2 more general questions that are continuously raised in relation to this procedure and system. And one is would the adjustment process have worked better if we didn't have lagged reserve accounting, and another is would it have worked better if the discount rate were more flexible. With regard to lagged reserve accounting, clearly that makes it almost impossible in the very short run to hit any total reserve type target. Hitting such a target may be impossible in any event in the short run, but the lagged reserve accounting certainly makes it very clear that it's impossible. For example, in the last 2 weeks of October the reason we came back, money supply came back under control was that demand deposits dropped very sharply in those 2 weeks, but we didn't get a drop in required reserves commensurate with that because the demand deposits had been strong in the previous 2 weeks and therefore the funds rate pressures emerged in the last part of October at a time when the money supply was already adjusting down, in lagged response really, to what had happened early. Moreover, the total reserves then were conditioned by the required reserves released in the last half of October to meet the demand deposits that were created in the first half of October. There was no way to reduce those total reserves because banks had to meet their reserve requirements. If Peter didn't provide the reserves at the Desk they would borrow them, and borrowings rose substantially as did the federal funds rate. If there hadn't' been lagged reserve accounting, the total reserves wouldn't have been as far off path in the first half of the month as they in fact were. That is, required reserves would have gone down in the last half of October and the total reserves would have gone down, maybe not to the full extent, but at least to a considerable degree. You did begin to get that adjustment that would have occurred in the last half of October in early November, and that's the essential reason why the total reserves in November, the actual total reserves are not as far above path as they were in the first half of

October. Banks had made the adjustments, demand deposits were weakening, and required reserves were coming down relative to the original path, and so the deviation of total reserves from path was only \$303 million in the 3 weeks ending November 21 whereas it had been \$390 million for October 10th through 31st. So what the lagged reserve accounting did, was in effect, delay the adjustment in total reserves and makes it more difficult to aim at a total reserve target over the very short run. In addition, it probably means that there would be a little more fluctuation in the federal funds rate from week to week than if you didn't have a lagged reserve, again because it delays the adjustment, it doesn't come quite as promptly as it otherwise would. In light of these possibilities, we are looking at the question of whether you shouldn't do away with lagged reserve accounting and with the aim of presenting the Board with memo in the not too distant future in that regard. I might say that I think it's not a simple question, and that the monetarists publicity in that respect is much overdone. Most of us have never believed that lagged reserve accounting should have been put in place to begin with but it's very hard to argue that its actually fatal to control of the aggregates over the length of run of 3 to 6 months when you consider you are dealing only with a 2 week lag. But it does have the deficiency I believe in any week, in any given week, of meaning that there's not a tight relationship between the reserves you supply and the deposits because in some theoretical sense deposits can be infinite or whatever you want because they don't relate to the reserves that are supplied in that week by the Desk. In turns out in practice of course they're not infinite because bank responds to the emerging federal funds rate and that's what determine in effect, their deposit and investment processes. But it is theoretically, a little bit odd to be on a reserve path and yet have in place a system which says in any given week there is the possibility that deposits can be almost anything the banking system wants although you recognize in practice that it's interest rates that determine the deposits from both and

the banks and the public's point of view. So it's not the exactly the world's best public relations reserve structure if you are on a reserve target. But there are, there will be a number of practical problems should the Board want to do away with it, and there will be a difficult decision in terms of the careful assessment of benefits and costs. The other issue that gets raised is whether the borrowings has been a factor that has made a problem, that is in throwing us off path or whether it's a buffering factor in the adjustment process and what implications does this have for the discount rate. As you can see in the 4 weeks ending October borrowings were \$2.1 billion, well above what we had originally put in there, and of course that was expected to happen if demand was strong. And the 3 weeks ending November they have dropped down to \$1.8 indeed most recently or down to around \$1.6. The, I believe most of us would feel that the expansion borrowing most of which occurred in the second half of October when borrowing rose to \$3 billion and the funds rate up to around 15 percent reflected the process by which banks were adjusting to the pressure being put on them by the Desk holding back on what the Desk can hold back on which is nonborrowed reserves. As the Desk held back not that because banks borrowed, were forced to borrow the required reserves that had been created 2 weeks ago, and in that process the funds rate went up, market interest rates went up, and banks began making the adjustments as did the public and indeed more rapidly than one could even have believed ahead of time in your optimistic frame of mind and perhaps coincidentally began making the adjustments that would bring them back to path. As I say the total reserves began coming back in the next 3 weeks. I have, if the \$3 billion of borrowing had developed with a funds rate not rising to 15-1/2 but staying at 13 then it seemed to me there was clear evidence that the banks were not making those adjustments. That is they were simply borrowing and not doing the other things that might be required to get demand deposits back on path. However, when the funds rate went up 15, 15-1/2 percent, I believe that was evidence and we took



that view here even before we had the November results, that that was evidence that the banks were probably in fact making the adjustments that were likely to lead to slower money growth later, and therefore you did not have a clear reason at that high level of borrowing to raise the discount rate because you had adjustments in process as evidence by the behavior of the federal funds rate. That leads to the somewhat paradoxical conclusion that if borrowing had risen to \$3 billion and the funds rate had stayed 13 percent and had a stronger reason to raise the discount rate than if the funds rate rose to 15 percent, because if the funds rate had stayed at 13 banks weren't making the adjustments and therefore you would have raised the discount rate and really make it expensive for them to borrow the amounts they had to borrow given the nonborrowed reserves that were being put in. Well be that as it may if banks had continued at that \$3 billion level of borrowing for more than a couple of weeks and the funds rate had continued at 15, it might have been very clear that not enough adjustment had been in train in which case of course a rise in the discount rate given the nonborrowed reserves would put further upward adjustments on market rates and give banks further incentives to sell bills and do things like that, cut down loans and therefore lead to a slower money growth. So in this process the discount rate becomes a weapon which can be used in case the nonborrowed reserve path or whatever adjustments in that path are being made by the Manager aren't sufficient to cause money growth to slow down or speed up as the Committee might want. The discount rate can be used to reinforced. That is a rise in the discount rate would tend to reinforce upward pressures on market rates again unless the Committee asked the Manager to offset that by adjusting its nonborrowed up. And a decline in the discount rate can be used to reinforce pressures for lowering the funds rate. Now with that kind of background, that doesn't argue for a very different use of the discount window than use of the discount rate than before. It still leaves it flexible and judgmental but adds a different wrinkle in its use. Really an economic wrinkle, it almost

says that that should only be adjusted more for long-term purposes and not for short run adjustment purpose. On the other hand, it does seem a little odd to have banks borrowing \$3 billion at the basic discount rate if that's just short term adjustment borrowing, so we are trying to, we are considering for consideration by the Board and the Presidents a number of options in managing the discount window under this procedure. Now one of course is a perfectly flexible tied discount rate which has been discussed widely before. One of course is doing nothing any different from what you are doing now, but a third one, one which I think might have some interest is to have a second discount rate above the basic rate, but not like the, but available to banks for these kinds of buffering operations, that is they have a lot of required reserves, they are making adjustments that would bring money growth down, but to make these adjustments more orderly as was the case they are borrowing from the system. Now there is some possibility of developing a discount rate higher than the basic rate for that kind of borrowing, and there is the possibility in order for administration of the window to be the same district by district in that kind of circumstance to make that more or less automatic related to lines of credit of one sort of another with build-up incentives for them not to use them continuously, that is the rate goes up if you have used it more than one week, it goes up at 2 weeks, it goes up again etcetera. Well I'm just mentioning these possibilities as the sorts of things that we are trying to consider and would like to when we have it worked out a little more have discussion with the discount conferees, the proper discount officers group, and of course bring it through the get comments, bring it through the Presidents Conference and what have you before it comes to a Board consideration. But there is nothing in the, this will sort of turning the basic borrowing privilege on its head, that is the basic borrowing privilege which for small banks, we are thinking also now of a kind of a money adjustment credit line for large banks with built in incentives such that you don't, it's not a contribution to capital; it's

actually used for an adjustment and then goes away because price might go up to keep it. Well that kind of thing might have speeded up even further the response to, although its hard to conceive a response really being any faster than we seemed to have gotten here, but again I mention that could be coincidental. Well Mr. Chairman I have probably talked at too much length, but those are the, that concludes the comments I would have on this particular set of operations thus far.